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(54) Title: METHODS FOR IMPROVING THE NUTRITIONAL QUALITY OF RESIDUES OF THE FUEL, BEVERAGE ALCOHOL, FOOD AND FEED INDUSTRIES

(57) Abstract: A method is provided for improving the nutritional quality of a fibrous by-product or residue of a food manufacturing process, wherein the fibrous by-product or residue is inoculated with at least one filamentous fungus, and the fibrous by-product or residue is fermented thereby to decrease dry matter content, increase protein content, and decrease fat content of the by-product or residue. Suitable byproducts or residues include spent brewer's grains, dried distiller's grains, dried distiller's solubles, distiller's dried grains with solubles, residues of the cereal processing industry, wheat bran, soybean hulls, citrus pulp, beet pulp, rice husks or hulls, bagasse, apple pomace, and combinations thereof. Enzymes produced during the fermentation may also be used as valuable coproducts such as animal feed supplements, or may be used in primary fermentations for the brewing and distilling industry.